responsible for the collapse referred to by Dr. Levinstein, and, therefore, their average price could not have been very much less than 7*s.* 11*d.* When it is considered that the average pre-war price of the majority of dyes advertised at present by the British Dyestuffs Corporation was very much nearer 1*s.* than 8*s.*, it is difficult to imagine that there can be such underselling as is suggested.

On the other hand, will the dye users say that the quality of the dyes made at Huddersfield and Manchester is equal in every respect to that of the pre-war (and present) German product? Although the shade of the dyes is probably the same—and there is no doubt that the product made by the chemist in the works is fully equal to the German—this product must necessarily be reduced, by adding salt or other inert material, to a given standard. Precision and exactness in seeing that all deliveries conform to this standard of strength are of vital importance to the dyer, and divergence from this may well lead him to seek his supplies elsewhere.

Antarctic Research.

(1) *Scottish National Antarctic Expedition: Report on the Scientific Results of the voyage of S.Y. "Scotia," during the years* 1902, 1903, *and* 1904, *under the Leadership of Dr. William S. Bruce.* Vol. vii., Zoology; parts i.–xiii., Invertebrates; pp. viii + 323 + 15 plates. (Edinburgh: The Scottish Oceanographical Laboratory, 1920.) Price 50*s.*

(2) *British Museum (Natural History). British Antarctic ("Terra Nova") Expedition,* 1910. *Natural History Report. Zoology.* Vol. xi., No. 9. Mollusca. Part iii., Eupteropoda (Pteropoda Thecosomata) and Pterota (Pteropoda Gymnosomata). By Anne L. Massey. Pp. 203–232: No. 10. Mollusca. Part iv., Anatomy of Pelecypoda. By R. H. Burne. Pp. 233–256 + 4 plates: vol. iv., No. 3. Echinoderma (part xi.) and Enteropneusta. Larvæ of Echinoderma and Enteropneusta. By Prof. E. W. MacBride. Pp. 83–94 + 2 plates. (London: British Museum (Natural History), 1920.) Prices 7*s.* 6*d.* and 8*s.* 6*d.*

(1) THE seventh volume of the results of the successful voyage of the *Scotia,* under the able leadership of Dr. W. S. Bruce, contains a series of interesting memoirs. Mr. Pearcey identifies 267 species of Foraminifera, eleven of which are new. He thinks the group richer south of 70° than north of it, and that the Foraminiferal fauna of the arctic and antarctic regions is strikingly similar, from the generally uniform conditions of temperature extending over the bottom of the deep sea (*more* Sir J. Murray). The collection was especially rich in Sponges, which are ably described, with excellent figures, by Prof. Topsent. Ten Hexactinellids were obtained, including new species of Malacosaccus, Acæocalyx, Docosaccus, and Caulophacus, the size of the first and last being remarkable, whilst the wonderful megascleres and microscleres enhance the interest of the group.

The antarctic seas abound in Tetractinellids, though the *Scotia* procured only three known forms. The Monaxonida are grouped as antarctic and subantarctic. Amongst the striking forms is *Cladorhiza thomsoni,* a relation of the interesting little Cladorhiza of the *Challenger,* which was sent as an Alcyonarian to Prof. Arthur Thomson, of Aberdeen. The author repeats his antagonism to the bipolarity theory by pointing out the richness of the antarctic region in Hexactinellids and their paucity in the arctic seas. The wide distribution of the Siphonophores Porpita, Velella, Physalia, and the Diphyidæ is shown by J. H. Koeppern. An elaborate memoir on the structure and relationships of the Hexactinian Porponia, Hertwig, is given by Prof. Carlgren, of Lund, showing, amongst other things, its close connection with Halcuria, mesenteries in both occurring regularly in the endocœls. The new species is *P. antarctica.*

Five species of stony corals are dealt with by Prof. Stanley Gardiner, the most important being a new species, *Madracis scotiae,* from the Abrolhos Bank. Mr. Laidlaw notices the pelagic Polyclad Turbellarian, *Planocera pellucida,* from St. Paul's Rocks; whilst Mr. Pringle Jameson describes the Chætognaths, the wide distribution of which, and the large size of *Sagitta gazellae,* are noteworthy. Mr. L. N. G. Ramsay again takes up the Nereids (Polychæts), of which there were six known forms and one new—*N. falklandica.* The peculiar genus Sclerocheilus receives important treatment from Prof. Ashworth, and a new form, *S. antarcticus,* is described. Miss Helen Pixell (Mrs. Goodrich) gives a careful account of the four Sabellids and the six Serpulids. The resemblance in certain respects of Ehlers' Sabellid genus Potamis to the genus Jasmineira, St. Joseph, merits further attention.

Mr. Tattersall deals with the Schizopods, Stomatopods, and non-antarctic Isopods, together with a few Schizopods collected by the *Discovery* in the tropical Atlantic. A new Boreomysis and the re-discovery of *Exosphaeroma tristense,* Leach, are interesting. The occurrence of a new species of the primitive Dorid, Bathydoris, has enabled

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Mr. J. T. Evans to give an account of its anatomy, which is in the main Doridiform, though the length of the nerve-collar, the position of the cerebral ganglia, and the absence of separate gastro-œsophageals diverge, and point to a condition earlier than that in the Pleurobranchids and Tritonia. The fusion of the ganglia of the visceral loop, again, is a modern feature, like the loss of the eyes in deep water.

(2) The three parts of the zoology of the *Terra Nova* antarctic expedition published by the British Museum comprise the anatomy of the Pelecypoda by Mr. R. M. Burne, viz. the structure of the Filibranchiate Arcidæ, Pectinidæ, and Limidæ, that of the Eulamellibranchiate Carditidæ, Veneridæ, and Anatinidæ, and traverse much of the ground worked by Pelsener. A curious feature is the occurrence of a finger-shaped glandular cæcum on each side behind the mouth in Lissarca, Adacnarca, and Philobrya, in connection with a ridge of modified epithelium between the body and the gill-axis. The presence of vestigial cephalic eyes in these and in Barbatia is also noteworthy, and the author thinks that at 250 fathoms their function may be other than that connected with light. The incubation of eggs in the mantle cavity in Adacnarca, in the supra-branchial chamber of Anatina, and in the interlamellar space in Venericardia is rare in marine Lamellibranchs, and may be an antarctic habit.

In her report on the Pteropods, Miss A. L. Massey adopts the terms of Boas, viz. Eupteropoda and Pterota for the older Thecosomata and Gymnosomata, since they are really not closely related, except for the presence of fins. All the seventeen specimens are known forms. If Bonnevie's view is correct, some species frequent the surface and others occur in the deeper water, so that surface-netting only might explain the absence of the latter. Miss Massey, however, does not allude to possible changes of vertical distribution from temperature, storms, light, or darkness. The materials have been worked out most carefully, structurally and otherwise. The wide distribution of Limacina and Clione suggests the possibility that several species of the former may yet be reduced to varieties, as Vayssière holds, and the same may be said with respect to *Clione limacina* and *C. antarctica*.

Prof. MacBride's description of the Larvæ of Echinoderma and Enteropneusta includes four species of the former, two of which, a Bipinnaria and an Auricularia, are new, whilst the latter is represented by a species of Tornaria. It is noteworthy that he was enabled, by the examination of *Auricularia antarctica,* to confirm H. Bury's original view that the anterior division of the cœlomic sac does not become directly converted into the hydrocœle. The latter grows out as a bud from its hinder aspect. Interesting points in the structure of *Auricularia nudibranchiata* are given, demonstrating that Chun's interpretations of the hydrocœle were erroneous; and what he thought to be a median pouch of the intestine is really double, so that the larva cannot belong to the Elasipoda, in which the diverticulum is single. Two examples of Tornaria furnished the author with stages in the development of the so-called "glomerulus," or "proboscis gland." He terms the glandular tissue around the blood-space "heart-gland," which he thinks an organ of internal secretion. All the three memoirs are illustrated by excellent figures.

W. C. M.

The Physiology of Pregnancy.

Radiant Motherhood: A Book for Those who are Creating the Future. By Dr. Marie C. Stopes. Pp. 246. (London: G. P. Putnam's Sons, Ltd., 1920.) Price 6*s*. net.

THE publication of the report of the Royal Commission on Venereal Diseases in 1916, and of two reports by the National Birth-rate Commission in 1916 and 1920, if it did not in itself bring in a new era of frank, open discussion of what had been regarded as the secrets of *la vie intime,* at any rate gave to that era official recognition, and perhaps something also of the nature of a benison. When, further, it became evident that civilised mankind (including womankind) had begun to show its intense interest in its own reproduction by experimenting upon it, and even by attempting to control it, it followed with an almost gravitational certainty that individuals would in separate volumes set forth the hitherto unrevealed aspects of such subjects, and would each try to outdistance competitors in what may be called a race to lay bare all the phenomena of the sexual relations which precede and of the obstetrical results which follow (when they are permitted) the cohabitation of man and woman.

Dr. Marie C. Stopes is one of the authors who have trodden this path in literature in her earlier works, entitled "Married Love" and "Wise Parenthood," and now in her latest book, which she has named "Radiant Motherhood." She is a doctor of science, London, a doctor of philosophy, Munich, a fellow and lecturer in palæobotany in University College, London, and she was a member of the National Birth-rate Commission when it was preparing its second report; but she lays no claim on her title-pages to the possession of any

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